

Attorney's Docket No. 5770.21

PATENT8-A  
Vc  
11-19-02

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Bastiaan Driehuys et al.

Examiner: Michael G. Hartley

Serial No.: 09/804,369

Group Art Unit: 1616

Filed: March 12, 2001

For: **DIAGNOSTIC PROCEDURES USING DIRECT INJECTION OF GASEOUS HYPERPOLARIZED  $^{129}\text{Xe}$  AND ASSOCIATED SYSTEMS AND PRODUCTS**

November 7, 2002

Commissioner for Patents  
Washington, DC 20231

## AMENDMENT

Sir:

In the claims:

Please cancel Claim 2 and Claims 24-88 without prejudice thereto.

Please replace the below amended claims for the pending claims of like number pursuant to 37 CFR 1.121.

*A 2*  
1. (Amended) A method of screening for the presence of a pulmonary embolism, comprising the steps of:

positioning a subject having a pulmonary region and a blood circulation path including veins and arteries in an NMR system, the subject's pulmonary region having pulmonary veins and pulmonary arteries and associated vasculature defining a pulmonary portion of the circulation path;

injecting a first quantity of polarized gaseous phase  $^{129}\text{Xe}$  directly into at least one vein of the subject, wherein the first quantity of polarized gaseous phase  $^{129}\text{Xe}$  is less than about 100 cubic centimeters;

obtaining NMR signal data associated with the injected polarized  $^{129}\text{Xe}$  in the pulmonary region of the subject, the signal data including information corresponding to the polarized gas introduced in said injecting step;

generating an MRI image having spatial visual representation of the NMR signal data of the injected polarized  $^{129}\text{Xe}$ ; and

*A*